CLAIMS

What is claimed is:

1. A numerical analysis data providing system in which a server side computer provides numerical analysis data to a user side computer connected to a network to perform a numerical analysis about a processing member and a forming member created by using a desired material,

wherein the user side computer comprises:

an input means inputting a material name and a property item;

a storage means storing addresses of the server side computer corresponded to the material name and the property item; and

a material name and property item transmitting means transmitting the material name and the property item to the server side computer having the address corresponded to the material name and the property item inputted from said input means, and

wherein the server side computer comprises:

a material property data storage means in which the material name and the property item are stored with corresponding to any one or more kinds of material property data from a mechanical property value, a thermal physical property value, and an electromagnetic property value as for plural materials;

a material name and property item receiving means

receiving the material name and the property item transmitted from said material name and property item transmitting means of the user side computer;

an extracting means extracting any one or more kinds of material property data from the mechanical property value, the thermal physical property value, and the electromagnetic property value corresponding to the material name and the property item stored by said material property data storage means based on the received material name and property item; and

a material property data transmitting means transmitting the material property data extracted by said extracting means to the user side computer, and

wherein the user side computer further comprises:

a material property data receiving means receiving the material property data transmitted from said material property data transmitting means of the server side computer.

2. The numerical analysis data providing system according to claim 1,

wherein the user side computer further comprises a numerical analysis means performing a numerical analysis by using the material property data.

3. The numerical analysis data providing system according to claim 2,

wherein the server side computer further comprises a means making the material property data available to said numerical analysis means but invisible to a user when the material property data

extracted by said extracting means is transmitted to the user side computer.

4. The numerical analysis data providing system according to claim 2,

wherein said numerical analysis means is a means performing a coupled analysis combining any one or plural of a structural analysis, a heat conduction analysis, a fluid analysis, and an electromagnetic filed analysis.

5. The numerical analysis data providing system according to claim 1,

further comprising:

a charging means performing a charging in accordance with the transmission of the material property data of the server side computer.

6. The numerical analysis data providing system according to claim 1,

further comprising:

an authentication means performing a user authentication when the user side computer connects to the server side computer.

7. A numerical analysis results providing system in which a server side computer provides numerical analysis results to a user side computer connected to a network to perform a numerical analysis about a processing member and a forming member created by using a desired material,

wherein the user side computer comprises:

an input means inputting data containing a

material name and a property item;

a storage means storing addresses of the server
side computer corresponding to the material name and
the property item; and

a material name and property item transmitting
means transmitting the data containing the material
name and the property item to the server side
computer having the address corresponded to the
material name and the property item inputted from
said input means, and

wherein the server side computer comprises:

a material property data storage means in which
the material name and the property item are stored
with corresponding to any one or more kinds of
material property data from a mechanical property
value, a thermal physical property value, and an
electromagnetic property value as for plural
materials;

a material name and property item receiving means
receiving the data containing the material name and
the property item transmitted from said material name
and property item transmitting means of the user side
computer;

an extracting means extracting any one or more
kinds of material property data from the mechanical
property value, the thermal physical property value,
and the electromagnetic property value corresponding
to the material name and the property item stored by
said material property data storage means based on

the received material name and property item;

a numerical analysis means performing a numerical analysis by using the material property data extracted by said extracting means; and

a numerical analysis results transmitting means transmitting the numerical analysis results by said numerical analysis means to the user side computer, and

wherein the user side computer further comprises:

a numerical analysis results receiving means receiving the numerical analysis results transmitted from said numerical analysis results transmitting means of the server side computer.

8. The numerical analysis results providing system according to claim 7,

further comprising:

a charging means performing a charging in accordance with the numerical analysis of the server side computer.

9. The numerical analysis results providing system according to claim 7,

wherein said numerical analysis means is a means performing a coupled analysis combining any one or plural of a structural analysis, a heat conduction analysis, a fluid analysis, and an electromagnetic filed analysis.

10. The numerical analysis results providing system according to claim 7,

further comprising:

an authentication means performing a user authentication when the user side computer connects to the server side computer.

11. A numerical analysis data providing device providing numerical analysis data to a user side computer connected to a network to perform a numerical analysis about a processing member and a forming member created by using a desired material, comprising:

a material property data storage means in which a material name and a property item are stored with corresponding to any one or more kinds of material property data from a mechanical property value, a thermal physical property value, and an electromagnetic property value as for plural materials;

a material name and property item receiving means receiving the material name and the property item transmitted from the user side computer;

an extracting means extracting any one or more kinds of material property data from the mechanical property value, the thermal physical property value, and the electromagnetic property value corresponding to the material name and property item stored by said material property data storage means based on the received material name and property item; and

a material property data transmitting means transmitting the material property data extracted by said extracting means to the user side computer.

12. A numerical analysis results providing device providing numerical analysis results to a user side computer connected to a network to perform a numerical analysis about a processing member and a forming member created by using a desired material, comprising:

a material property data storage means in which a material name and a property item are stored with corresponding to any one or more kinds of material property data from a mechanical property value, a thermal physical property value, and an electromagnetic property value as for plural materials;

a material name and property item receiving means receiving the data containing the material name and the property item transmitted from the user side computer;

an extracting means extracting any one or more kinds of material property data from the mechanical property value, the thermal physical property value, and the electromagnetic property value corresponding to the material name and the property item stored by said material property data storage means based on the received material name and property item;

a numerical analysis means performing a numerical analysis by using the material property data extracted by said extracting means; and

a numerical analysis results transmitting means transmitting the numerical analysis results by said

numerical analysis means to the user side computer.

13. A numerical analysis data unitization device receiving a provision of numerical analysis data from a server side computer connected to a network to perform a numerical analysis about a processing member and a forming member created by using a desired material, comprising:

an input means inputting a material name and a property item;

a storage means storing addresses of the server side computer corresponded to the material name and the property item; and

a material name and property item transmitting means transmitting the material name and the property item to the server side computer having the address corresponded to the material name and the property item inputted from said input means, and

a material property data receiving means receiving the material property data extracted from a material property data storage means based on the material name and the property item and transmitted at the server side computer.

14. A numerical analysis results unitization device receiving a provision of numerical analysis results from a server side computer connected to a network to perform a numerical analysis about a processing member and a forming member created by using a desired material, comprising:

an input means inputting data containing a

material name and a property item;

a storage means storing addresses of the server
side computer corresponded to the material name and
the property item; and

a material name and property item transmitting
means transmitting the data containing the material
name and the property item to the server side
computer having the address corresponded to the
material name and the property item inputted from
said input means, and

a numerical analysis results receiving means
receiving numerical analysis results which is
transmitted after material property data are
extracted from a material property data storage means
based on the material name and the property item at
the server side computer, and the numerical analysis
is performed by using the material property data.

15. A numerical analysis data providing method in
which a server side computer provides numerical
analysis data to a user side computer connected to a
network to perform a numerical analysis about a
processing member and a forming member created by
using a desired material, comprising:

transmitting a material name and a property item
to the server side computer having an address
corresponded to the material name and the property
item inputted from an input means at the user side
computer,

receiving the material name and the property item

transmitted from the user side computer;

extracting any one or more kinds of material
property data from a mechanical property value, a
thermal physical property value, and an
electromagnetic property value corresponding to the
material name and property item stored by a material
property data storage means in which the material
name and the property item are stored with
corresponding to any one or more kinds of material
property data from the mechanical property value, the
thermal physical value, and the electromagnetic
property value as for plural materials based on the
received material name and property item; and

transmitting the extracted material property data
to the user side computer at the server side computer,
and

further receiving the material property data
transmitted from the server side computer at the user
side computer.

16. A numerical analysis results providing method
in which a server side computer provides numerical
analysis results to a user side computer connected to
a network to perform a numerical analysis about a
processing member and a forming member created by
using a desired material, comprising:

transmitting data containing a material name and
a property item to the server side computer having an
address corresponded to the material name and the
property item inputted from an input means at the

user side computer,

receiving the data containing the material name and the property item transmitted from the user side computer;

extracting any one or more kinds of material property data from a mechanical property value, a thermal physical property value, and an electromagnetic property value corresponding to the material name and the property item stored by a material property data storage means in which the material name and the property item are stored with corresponding to any one or more kinds of material property data from the mechanical property value, the thermal physical value, and the electromagnetic property value as for plural materials based on the received material name and property item;

performing a numerical analysis by using the extracted material property data; and

transmitting the numerical analysis results to the user side computer at the server side computer, and

further receiving the numerical analysis results transmitted from the server side computer at the user side computer.